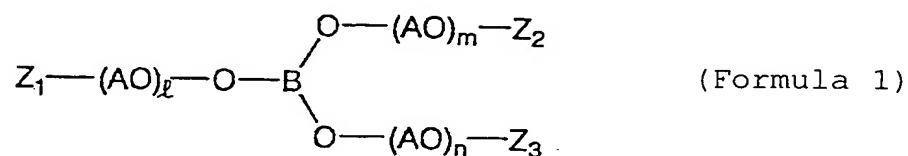


WHAT IS CLAIMED IS:

1. A polymerizable boron-containing compound for electrochemical device represented by (formula 1):



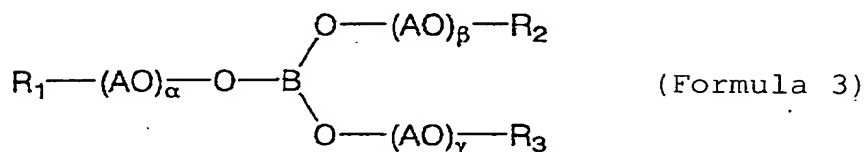
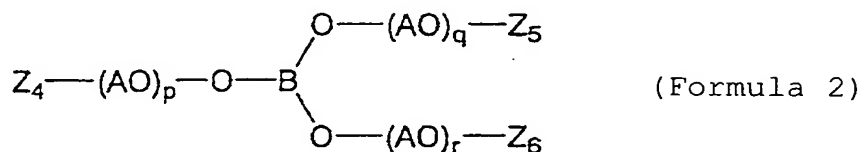
wherein B is a boron atom;  $\text{Z}_1$ ,  $\text{Z}_2$  and  $\text{Z}_3$  are independently an organic group having an acryloyl or methacryloyl group, or a hydrocarbon group of 1 to 10 carbon atoms, provided that one or two of  $\text{Z}_1$ ,  $\text{Z}_2$  and  $\text{Z}_3$  are organic groups having an acryloyl or methacryloyl group; AOs are independently an oxyalkylene group of 1 to 6 carbon atoms and are of one or more kinds; and  $\ell$ ,  $m$  and  $n$  are independently an average number of moles of the oxyalkylene group(s) added of less than 4 and more than 0, provided that  $\ell + m + n$  is 1 or more.

2. An ion-conductive polyelectrolyte for electrochemical device comprising a polymer obtained by polymerizing a boron-containing compound according to claim 1.

3. An ion-conductive polyelectrolyte for electrochemical device comprising a polymer obtained by polymerizing a boron-containing compound according to claim 1 and at least one electrolytic salt.

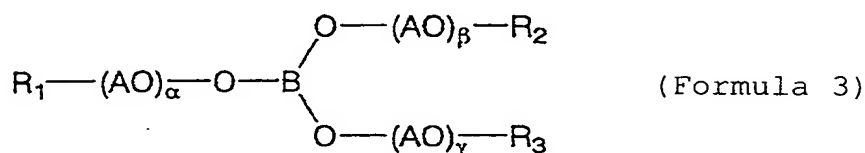
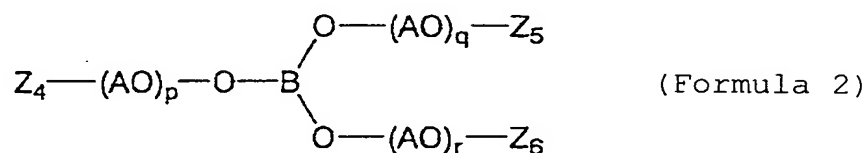
4. A polymerizable composition for electrochemical device comprising a boron-containing compound

represented by (formula 2) and a boron-containing compound represented by (formula 3) so that the molar ratio between the compound of (formula 2) and the compound of (formula 3) [(the number of moles of the compound of (formula 3))/(the number of moles of the compound of (formula 2))] is 0.1 to 9:



wherein B is a boron atom; Z<sub>4</sub>, Z<sub>5</sub> and Z<sub>6</sub> are independently an organic group having an acryloyl or methacryloyl group, or a hydrocarbon group of 1 to 10 carbon atoms, provided that at least one of Z<sub>4</sub>, Z<sub>5</sub> and Z<sub>6</sub> is an organic group having an acryloyl or methacryloyl group; R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are independently a hydrocarbon group of 1 to 10 carbon atoms; AOs are independently an oxyalkylene group of 1 to 6 carbon atoms and are of one or more kinds; and p, q, r, α, β and γ are independently an average number of moles of the oxyalkylene group(s) added of less than 4 and more than 0, provided that each of the sum p + q + r and the sum α + β + γ is 1 or more.

5. A polymerizable composition for electrochemical device comprising a boron-containing compound represented by (formula 2) and a boron-containing compound represented by (formula 3) so that the molar ratio between the compound of (formula 2) and the compound of (formula 3) [(the number of moles of the compound of (formula 3))/(the number of moles of the compound of (formula 2))] is 0.1 to 4:



wherein B is a boron atom;  $\text{Z}_4$ ,  $\text{Z}_5$  and  $\text{Z}_6$  are independently an organic group having an acryloyl or methacryloyl group, or a hydrocarbon group of 1 to 10 carbon atoms, provided that at least one of  $\text{Z}_4$ ,  $\text{Z}_5$  and  $\text{Z}_6$  is an organic group having an acryloyl or methacryloyl group;  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_3$  are independently a hydrocarbon group of 1 to 10 carbon atoms; AOs are independently an oxyalkylene group of 1 to 6 carbon atoms and are of one or more kinds; and  $p$ ,  $q$ ,  $r$ ,  $\alpha$ ,  $\beta$  and  $\gamma$  are independently an average number of moles of the oxyalkylene group(s) added of less than 4 and more than 0, provided that

each of the sum  $p + q + r$  and the sum  $\alpha + \beta + \gamma$  is 1 or more.

6. An ion-conductive polyelectrolyte for electrochemical device comprising a polymer obtained by polymerizing a polymerizable composition according to claim 4.

7. An ion-conductive polyelectrolyte for electrochemical device comprising a polymer obtained by polymerizing a polymerizable composition according to claim 5.

8. An ion-conductive polyelectrolyte for electrochemical device comprising a polymer obtained by polymerizing a polymerizable composition according to claim 4 and at least one electrolytic salt.

9. An ion-conductive polyelectrolyte for electrochemical device comprising a polymer obtained by polymerizing a polymerizable composition according to claim 5 and at least one electrolytic salt.

10. An ion-conductive polyelectrolyte for electrochemical device according to claim 3, wherein said electrolytic salt is selected from the group consisting of  $\text{LiPF}_6$ ,  $\text{LiN}(\text{CF}_3\text{SO}_2)_2$ ,  $\text{LiClO}_4$ ,  $\text{LiBF}_4$ ,  $\text{LiAsF}_6$ ,  $\text{LiI}$ ,  $\text{LiBr}$ ,  $\text{LiSCN}$ ,  $\text{Li}_2\text{B}_{10}\text{Cl}_{10}$  and  $\text{LiCF}_3\text{CO}_2$ .

11. An ion-conductive polyelectrolyte for electrochemical device according to claim 7, wherein said electrolytic salt is selected from the group consisting of  $\text{LiPF}_6$ ,  $\text{LiN}(\text{CF}_3\text{SO}_2)_2$ ,  $\text{LiClO}_4$ ,  $\text{LiBF}_4$ ,  $\text{LiAsF}_6$ ,  $\text{LiI}$ ,  $\text{LiBr}$ ,  $\text{LiSCN}$ ,  $\text{Li}_2\text{B}_{10}\text{Cl}_{10}$  and  $\text{LiCF}_3\text{CO}_2$ .